

ABSTRACT OF THE DISCLOSURE

5 A force feedback interface and method providing a selective disturbance filter for providing selective reduction or elimination of displayed disturbances associated with output force sensations. A force feedback interface device is connected to a host computer that displays a graphical environment. The interface device includes a user manipulatable object, a sensor for detecting movement of the user object, and an actuator to apply output forces to the user object. 10 A microprocessor outputs controlling force signals to the actuator, receives sensor signals from the sensors and reports locative data to the host computer indicative of the movement of the user object. The host computer updates a position of a displayed user-controlled graphical object in the graphical environment based on the reported data. The microprocessor implements a selective disturbance filter for modifying the locative data reported to the host computer when 15 the output force would cause a disturbance to the user-controlled graphical object, the disturbance occurring when an output force sensation affects the position of the user object such that the host computer would display the user controlled graphical object in an undesired location or with an undesired motion in the graphical environment.